

IN THE CLAIMS

1-40 (cancelled)

41. (Currently amended) A process for coating a metallic surface of a metallic substrate comprising applying, an organic, anionically, cationically or radically curable anticorrosive composition, to the metallic surface, wherein said anticorrosive composition comprises a dispersion or solution containing at least two components that are at least partially anionically, cationically or radically curable selected from the group consisting of a monomer, an oligomer and a polymer with a total content in the range from 50 to 95 wt.%,

wherein at least one monofunctional monomer or monofunctional oligomer is present in an amount of from 1 to 58 wt.%;

from 0.5 to 22 wt.% of at least one photoinitiator for anionic, cationic or/and radical crosslinking if electron beam radiation is not used,

from 0.05 to 6 wt.% of a first organic corrosion inhibitor, and

optionally at least one further organic or/and inorganic corrosion inhibitor with a total content in the range from 0.1 to 12 wt.%,

optionally at least one hardener for a chemical postcure with a content in the range from 0.05 to 8 wt.%,

optionally up to 35 wt.% of an additive,

and optionally water or/and at least one organic solvent in a total content of 0.01 to 5 wt.%, relative in each case to the solids contents in wt.%,

wherein the anticorrosive composition is applied to the metallic surfaces in a wet film thickness in the range from 0.5 to 25 μm ; and at least one of anionically, ~~cationically~~, cationically, or radically curing the composition to form an anticorrosive coating on the metal

surface, wherein the anticorrosive coating has a dry film thickness in the range from 0.4 to 20 μm and a chemical resistance of over 20 MEK cycles, determined in the MEK test in accordance with ECCA standard T11 with methyl ethyl ketone wherein the coating has a chemical resistance of at least 40 MEK cycles, and cycles and ~~whereby the monomers, oligomers and/or polymers are selected such that a narrow distribution of medium-sized chain lengths results when the components are cross-linked~~

wherein the metallic strips substrates are coated at ~~strip velocities~~ a velocity of up to 220 m per minute-second.

42. (Currently amended) A process for coating a metallic surface of a metallic substrate comprising applying an organic, anionically, cationically or/and radically curable anticorrosive composition, without applying a pretreatment coat prior to applying the anticorrosive composition, wherein the anticorrosive composition is a dispersion or solution which is applied directly to the metallic surface in a wet film thickness in the range from 0.4 to 25 μm , is optionally dried and is then at least one of anionically, cationically or or/and radically cured to form an anticorrosive coating on said metallic surface which displays a dry film thickness in the range from 0.4 to 20 μm , wherein the anticorrosive coating preferably achieves a flexibility and bond strength of $\leq T3$, determined by means of a T-bend test in accordance with ECCA standard T7 on hot-galvanised precoated steel sheets of 0.3 mm thickness organically coated in a film thickness of 8 μm , wherein the coating has a chemical resistance of at least 40 MEK cycles, and ~~whereby the monomers, oligomers and/or polymers are selected such that a narrow distribution of medium-sized chain lengths results when the components are cross-linked~~

wherein the metallic strips substrates are coated at ~~strip velocities~~ a velocity of up to 220 m per minute-second.

43. (Previously presented) The process according to claim 41, wherein at least two components selected from the group of monomers, oligomers and polymers, which are at least partially anionically, cationically or/and radically curable, are added to the anticorrosive composition, wherein the content of monomers is in the range from 0 to 60 wt.%, the content of oligomers is in the range from 0 to 60 wt.% and the content of polymers is in the range from 10 to 70 wt.%, wherein on the one hand at least one monomer or/and at least one oligomer and on the other hand at least one polymer is present.

44. (Previously presented) The process according to claim 42, wherein at least two components selected from the group of monomers, oligomers and polymers, which are at least partially anionically, cationically or/and radically curable, are added to the anticorrosive composition, wherein the content of monomers is in the range from 0 to 60 wt.%, the content of oligomers is in the range from 0 to 60 wt.% and the content of polymers is in the range from 10 to 70 wt.%, wherein on the one hand at least one monomer or/and at least one oligomer and on the other hand at least one polymer is present.

45. (Previously presented) The process according to claim 41, wherein the monomers or oligomers or both based on unsaturated aliphatic or unsaturated aromatic compounds are added to the anticorrosive composition.

46. (Currently amended) The process according to claim 42, wherein 42, wherein the monomers or oligomers or both based on unsaturated aliphatic or unsaturated aromatic compounds are added to the anticorrosive composition.

47. (Previously presented) The process according to claim 41, wherein the at least one anionically, cationically or/and radically polymerizable monomer or/and oligomer is selected from the group consisting of an acrylate, a methacrylate, a polyester and a polyurethane.
48. (Previously presented) The process according to claim 42, wherein the at least one anionically, cationically or/and radically polymerizable monomer or/and oligomer is selected from the group consisting of an acrylate, a methacrylate, a polyester and a polyurethane.
49. (Previously presented) The process according to claim 41, wherein the at least one anionically, cationically or/and radically polymerizable monomer or/and oligomer is selected from the group consisting of butanediol diacrylate, diethylene glycol diacrylate, dipropylene glycol diacrylate, 2-ethylhexyl acrylate, hexanediol dicyl acrylate, hydroxypropyl methacrylate, isobornyl acrylate, isobornyl methacrylate, polyethylene diacrylate, triethylol propane formal acrylate, trimethyl propane triacrylate, trimethylol propane formal acrylate, triethylol propane acrylate, trimethylol propane acrylate and tripropylene glycol diacrylate.
50. (Previously presented) The process according to claim 41, wherein at least one flexibilizing resin or at least one modified flexibilizing resin is additionally added to the anticorrosive composition.
51. (Previously presented) The process according to claim 42, wherein at least one flexibilizing resin or ~~or/and~~ at least one modified flexibilizing resin is additionally added to the anticorrosive composition.
52. (Previously presented) The process according to claim 41, wherein at least one coupling polymer is present in the anticorrosive composition.

53. (Previously presented) The process according to claim 42, wherein at least one coupling polymer is present in the anticorrosive composition.

54. (Previously presented) The process according to claim 41, wherein at least one base polymer based on acrylate, epoxide, methacrylate, polyester, polyurethane or/and copolymers thereof is added to the anticorrosive composition.

55. (Previously presented) The process according to claim 42, wherein at least one base polymer based on acrylate, epoxide, methacrylate, polyester, polyurethane or/and copolymers thereof is added to the anticorrosive composition.

56. (Previously presented) The process according to claim 41, wherein the dispersion or solution of at least one photoinitiator is added to the anticorrosive composition, based on compounds selected from the group comprising amino ketones, benzoin ethers, benzophenones, dimethyl ketals, glyoxylates, hydroxyketones, hydroxyphenones, isopropyl ethers, metallocenes, organic iodine compounds, phenyl ketones, phenyl propanes, phosphine oxides and derivatives thereof, in order to allow an anionic, cationic or/and radical cure.

57. (Previously presented) The process according to claim 42, wherein the dispersion or solution of at least one photoinitiator is added to the anticorrosive composition, based on compounds selected from the group comprising amino ketones, benzoin ethers, benzophenones, dimethyl ketals, glyoxylates, hydroxyketones, hydroxyphenones, isopropyl ethers, metallocenes, organic iodine compounds, phenyl ketones, phenyl propanes, phosphine oxides and derivatives thereof, in order to allow an anionic, cationic or/and radical cure.

58. (Currently amended) The process according to claim 41, wherein at least one crosslinking agent is added to the anticorrosive composition, based on isocyanate, isocyanurate, melamine resin or compounds which can release isocyanate or isocyanurate at elevated temperature, in order to allow a chemical postcure, ~~which is preferably intensified by heating.~~

59. (Previously presented) The process according to claim 42, wherein at least one crosslinking agent is added to the anticorrosive composition, based on isocyanate, isocyanurate, melamine resin or compounds which can release isocyanate or isocyanurate at elevated temperature, in order to allow a chemical postcure.

60. (Previously presented) The process according to claim 41, wherein at least one first organic corrosion inhibitor is added to the anticorrosive composition, selected from the group of compounds based on amines, thiols and conductive polymers as well as a dicarboxylic acid.

61. (Previously presented) The process according to claim 42, wherein at least one first organic corrosion inhibitor is added to the anticorrosive composition, selected from the group of compounds based on amines, thiols and conductive polymers as well as a dicarboxylic acid.

62. (Currently amended) The process according to claim 41, wherein at least one further organic or/and inorganic corrosion inhibitor is added to the anticorrosive composition, selected from the group based on anticorrosive pigments and compounds of titanium, hafnium, zirconium, carbonate, ammonium carbonate, amines, amine derivatives, derivatives of an organic acid, thiols or conductive polymers ~~polymers, wherein the anticorrosive pigments are preferably those based on a silica, an oxide or a silicate.~~

63. (Previously presented) The process according to claim 41, wherein a corrosion inhibitor is added to the anticorrosive composition in a ratio of organic to inorganic corrosion inhibitors in the range from 1 : 8 to 1 : 20.

64. (Previously presented) The process according to claim 42, wherein a corrosion inhibitor is added to the anticorrosive composition in a ratio of organic to inorganic corrosion inhibitors in the range from 1 : 8 to 1 : 20.

65. (Currently amended) The process according to claim 41, wherein at least one additive is added to the anticorrosive composition, wherein at least one wetting agent, defoaming agent, lubricant, bonding agent, pigments, flow control agents, agents to increase reactivity, surface additives to increase scratch resistance, thixotropic auxiliary agents or examples for substrate wetting, ~~such as are used in particular for bonding to electrodeposition coatings, wherein at least one wetting agent, defoaming agent~~

66. (Currently amended) The process according to claim 42, wherein at least one additive is added to the anticorrosive composition, wherein at least one wetting agent, defoaming agent, lubricant, bonding agent, pigments, flow control agents, agents to increase reactivity, surface additives to increase scratch resistance, thixotropic resistance or auxiliary agents or examples for ~~substrate wetting such as are used for bonding to electrodeposition coatings.~~

67. (Previously presented) The process according to claim 41, wherein the anticorrosive composition contains at least one lubricant selected from the group of compounds based on graphite, polyethylene, polypropylene, polytetrafluoroethylene, silane, siloxane and wax.

68. (Previously presented) The process according to claim 42, wherein the anticorrosive composition contains at least one lubricant selected from the group of compounds based on graphite, polyethylene, polypropylene, polytetrafluoroethylene, silane, siloxane and wax.

69. (Previously presented) The process according to claim 41, wherein the anticorrosive composition contains as additive at least one pigment selected from the group of compounds based on coloured pigment, metal pigment, oxide, phosphate, phosphide, phosphosilicate, silicate, electrically conductive pigment and coated pigment and from the group comprising aluminium, aluminium alloys, iron alloys, iron hydroxide, iron oxide, iron phosphate, iron phosphide, graphite, silica, modified silica, optionally modified aluminium silicate, alkaline earth silicate or aluminosilicate, hypostoichiometric electrically conductive oxide, carbon black, zinc and more highly corrosion-resistant aluminium- or zinc-containing alloy.

70. (Previously presented) The process according to claim 42, wherein the anticorrosive composition contains as additive at least one pigment selected from the group of compounds based on colored pigment, metal pigment, oxide, phosphate, phosphide, phosphosilicate, silicate, electrically conductive pigment and coated pigment and selected from the group comprising aluminium, aluminium alloys, iron alloys, iron hydroxide, iron oxide, iron phosphate, iron phosphide, graphite, silica, modified silica, optionally modified aluminium silicate, alkaline earth silicate or aluminosilicate, hypostoichiometric electrically conductive oxide, carbon black, zinc and more highly corrosion-resistant aluminium- or/and zinc-containing alloy.

71. (Previously presented) The process according to claim 41, wherein on application the anticorrosive coating displays a viscosity in the range from 80 to 20000 mPa·s, measured at a

temperature of 25°C with a Haake VT 500 rotational viscometer with an MV DIN measuring cylinder in accordance with DIN 53019.

72. (Previously presented) The process according to claim 42, wherein on application the anticorrosive coating displays a viscosity in the range from 80 to 20000 mPa·s, measured at a temperature of 25°C with a Haake VT 500 rotational viscometer with an MV DIN measuring cylinder in accordance with DIN 53019.

73. (Previously presented) The process according to claim 41, wherein on application the anticorrosive composition has a temperature in the range from 5 to 90°C.

74. (Previously presented) The process according to claim 42, wherein on application the anticorrosive composition has a temperature in the range from 5 to 90°C.

75. (Previously presented) The process according to claim 41, wherein the anticorrosive composition is applied to the metallic surface by pouring without or with a knife, spraying, atomisation, dipping or/and rolling.

76. (Previously presented) The process according to claim 42, wherein the anticorrosive composition is applied to the metallic surface by pouring without or with a knife, spraying, atomisation, dipping or/and rolling.

77. (Previously presented) The process according to claim 41, wherein surfaces consisting of aluminium, aluminium-containing alloys, chromium, chromium alloys, magnesium alloys, stainless steel, steel, zinc, zinc-containing alloys, tin or/and tin-containing alloys are coated.

78. (Previously presented) The process according to claim 42, wherein surfaces consisting of aluminium, aluminium-containing alloys, chromium, chromium alloys, magnesium alloys, stainless steel, steel, zinc, zinc-containing alloys, tin or/and tin-containing alloys are coated.

79. (Currently amended) The process according to claim 41, wherein the wet film of the anticorrosive composition is dried at temperatures in the range from 30 to 95°C 95°C, preferably ~~by heating in an oven, inductive drying, IR irradiation, NIR irradiation or/and microwave irradiation.~~

80. (Currently amended) The process according to claim 42, wherein the wet film of the anticorrosive composition is dried at temperatures in the range from 30 to 95°C, ~~preferably by heating in an oven, inductive drying, IR irradiation, NIR irradiation or/and microwave irradiation.~~

81. (Previously presented) The process according to claim 41, wherein the largely or completely dry film of the anticorrosive composition is irradiated with UV radiation, and is partially, largely or completely crosslinked in this way.

82. (Previously presented) The process according to claim 42, wherein the largely or completely dry film of the anticorrosive composition is irradiated with UV radiation, and is partially, largely or completely crosslinked in this way.

83. (Previously presented) The process according to claim 41, wherein the anticorrosive composition is selected in terms of double bonds of the monomers, oligomers or/and polymers and the content of monomers, oligomers or/and polymers and in terms of the

duration, intensity and wavelength of the UV radiation such that a polymeric network having a medium-sized distance between crosslinking points is formed which at the same time has high flexibility and high chemical resistance.

84. (Previously presented) The process according to claim 42, wherein the anticorrosive composition is selected in terms of double bonds of the monomers, oligomers or/and polymers and the content of monomers, oligomers or/and polymers and in terms of the duration, intensity and wavelength of the UV radiation such that a polymeric network having a medium-sized distance between crosslinking points is formed which at the same time has high flexibility and high chemical resistance.

85. (Previously presented) The process according to claim 41, wherein the anticorrosive composition and the anionically, cationically or/and radically cured dry film produced therewith contains at least one hardener, such that the dry film, optionally after being heated to at least 60°C, is chemically postcured.

86. (Previously presented) The process according to claim 42, wherein the anticorrosive composition and the anionically, cationically or/and radically cured dry film produced therewith contains at least one hardener, such that the dry film, optionally after being heated to at least 60°C, is chemically postcured.

87. (Previously presented) The process according to claim 41, wherein the substrate coated with the anticorrosive coating can be coated with at least one further lacquer, paint or/and adhesive.

88. (Previously presented) The process according to claim 42, wherein the substrate coated with the anticorrosive coating can be coated with at least one further lacquer, paint or/and adhesive.

89. (Previously presented) The process according to claim 41, wherein the anticorrosive coating applied to the metallic body is formed with the substrate, wherein the anticorrosive coating remains largely or entirely undamaged.

90. (Previously presented) The process according to claim 42, wherein the anticorrosive coating applied to the metallic body is formed with the substrate, wherein the anticorrosive coating remains largely or entirely undamaged.

91. (Previously presented) The process according to claim 41, wherein the formed substrate in the form of a formed, cut or/and stamped metal sheet coated with the anticorrosive coating is joined to another construction element by clinching, gluing, welding or/and at least one other joining process.

92. (Previously presented) The process according to claim 42, wherein the formed substrate in the form of a formed, cut or/and stamped metal sheet coated with the anticorrosive coating is joined to another construction element by clinching, gluing, welding or/and at least one other joining process.

93. (Previously presented) The process according to claim 41, wherein the metallic surface is cleaned or pickled before application of the composition.

94. (Previously presented) The process according to claim 42, wherein the metallic surface is cleaned or pickled before application of the composition.

95. (Previously presented) The process according to claim 41, wherein the solution or dispersion is applied to a metallic strip carried on a conveyor belt system.

96. (Previously presented) The process according to claim 42, wherein the solution or dispersion is applied to a metallic strip carried on a conveyor belt system.

97-106. (Cancelled)

107. (Previously presented) The process according to claim 42, wherein at least one organic or inorganic corrosion inhibitor is added to the anticorrosive composition, selected from the group based on anticorrosive pigments and compounds of titanium, hafnium, zirconium, carbonate, ammonium carbonate, amines, an organic acid, thiols or conductive polymers.

108. (Currently amended) A process for coating a metallic surface of a metallic substrate comprising applying, an organic, anionically, cationically or radically curable anticorrosive composition, to the metallic surface, wherein said anticorrosive composition comprises a dispersion or solution containing at least two components that are at least partially anionically, cationically or radically curable selected from the group consisting of a monomer, an oligomer and a polymer with a total content in the range from 50 to 95 wt.%,

wherein at least one monofunctional monomer or monofunctional oligomer is present in an amount of from 1 to 58 wt.%;

from 0.5 to 22 wt.% of at least one photoinitiator for anionic, cationic or/and radical crosslinking if electron beam radiation is not used,

from 0.05 to 6 wt.% of a first organic corrosion inhibitor, and

optionally at least one further organic or inorganic corrosion inhibitor with a total content in the range from 0.1 to 12 wt.%,

optionally at least one hardener for a chemical postcure with a content in the range from 0.05 to 8 wt.%,

optionally up to 35 wt.% of an additive,

and optionally water or/and at least one organic solvent in a total content of 0.01 to 5 wt.%, relative in each case to the solids contents in wt.%,

wherein the anticorrosive composition is applied to the metallic surfaces in a wet film thickness in the range from 0.5 to 25 μm ; and at least one of anionically, cationically radically curing the composition to form an anticorrosive coating, wherein the anticorrosive coating has a dry film thickness in the range from 0.4 to 20 μm and a chemical resistance of over 20 MEK cycles, determined in the MEK test in accordance with ECCA standard T11 with methyl ethyl ketone wherein the coating has a chemical resistance of at least 40 MEK cycles, and ~~whereby the monomers, oligomers and/or polymers are selected such that a narrow distribution of medium-sized chain lengths results when the components are cross-linked~~

wherein the metallic surfaces are zinc or zinc alloy coated steel strips and are coated at strip velocities a velocity of up to 220 m per minute-second.

109. (Currently amended) A process for coating a metallic surface of a metallic substrate comprising applying an organic, anionically, cationically or/and radically curable anticorrosive composition, without applying a pretreatment coat prior to applying the anticorrosive composition, wherein the anticorrosive composition is a dispersion or solution which is applied directly to the metallic surface in a wet film thickness in the range from 0.4 to 25 μm , is optionally dried and is then anionically, cationically or radically cured to form an anticorrosive coating which displays a dry film thickness in the range from 0.4 to 20 μm , wherein the anticorrosive coating preferably achieves a flexibility and bond strength of $\leq T3$, determined by

means of a T-bend test in accordance with ECCA standard T7 on hot-galvanised precoated steel sheets of 0.3 mm thickness organically coated in a film thickness of 8 μm , wherein the coating has a chemical resistance of at least 40 MEK cycles, and ~~whereby the monomers, oligomers and/or polymers are selected such that a narrow distribution of medium sized chain lengths results when the components are cross-linked~~

wherein the metallic surfaces are zinc or zinc alloy coated steel strips and are coated at ~~strip velocities a velocity of up to 220 m per minute-second.~~

110. (Previously presented) The process of claim 41, wherein the composition comprises 30 to 44 %w of a mixture of isobornylacrylate and isobornylmethacrylate.

111. (Previously presented) The process of claim 42, wherein the composition comprises 30 to 44 %w of a mixture of isobornylacrylate and isobornylmethacrylate.

112. (Canceled)

113. (Canceled)

114. (Currently amended) The process of claim 41, wherein the composition includes 24 to 33 wt. % w of urethane acrylate polyester as the base polymer component.

115. (Currently amended) The process of ~~claim 41~~claim 42, wherein the composition includes 24 to 33 wt. %w of urethane acrylate polyester as the base polymer component.

116. (New) The process of claim 41, wherein 30 to 44 wt.% of the monofunctional monomer or oligomer is a mixture of isobornylacrylate and isobornylmethacrylate.

117. (New) The process of claim 42, wherein 30 to 44 wt.% of the monofunctional monomer or oligomer is a mixture of isobornylacrylate and isobornylmethacrylate.